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(54) **THERMAL MANAGEMENT OF A FUEL CELL ASSEMBLY**

(57) A fuel cell assembly (502) includes a plurality of fuel cells (504) each having an anode (506), a cathode (508), and a solid electrolyte (300) disposed between the anode (506) and the cathode (508). The fuel cell assembly further includes a bipolar separator plate (512) disposed between each fuel cell of the plurality of fuel cells (504). The bipolar separator plate (512) includes one or more fuel cell sub-units (514, 516, 518) each including a plurality of unit-cells (590, 591, 593). Each unit-cell in the

plurality of unit-cells (590, 591, 593) include an outer surface (630) and define an internal volume (636) that extends in multiple directions between a plurality of openings (642) defined on the outer surface (630). Each unit-cell in the plurality of unit-cells (590, 591, 593) is disposed adjacent to a neighboring unit-cell in the plurality of unit-cells (590, 591, 593) such that the plurality of unit-cells (590, 591, 593) collectively define one or more channels (515, 534, 556).

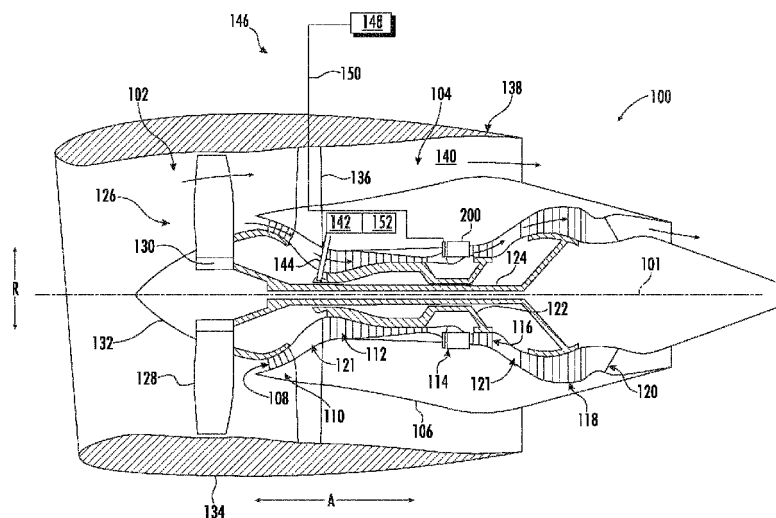


FIG. 1



EUROPEAN SEARCH REPORT

Application Number

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DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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			TECHNICAL FIELDS SEARCHED (IPC)
			H01M
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
Munich		15 May 2024	Perednis, Dainius
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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15 - 05 - 2024

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